

REMARKS

This Amendment responds to the Office Action dated July 13, 2005 in which the Examiner rejected claim 16 under 35 U.S.C. §101, rejected claims 1-13, 15 and 16 under 35 U.S.C. §102(e) and rejected claims 14 and 17-20 under 35 U.S.C. §103.

As indicated above, claim 16 has been amended to be directed to statutory subject matter. Therefore, applicants respectfully request the Examiner withdraws the rejection to claim 16 under 35 U.S.C. §101.

As indicated above, claims 1, 8, 15 and 16 have been amended in order to make explicit what is implicit in the claims. The amendment is unrelated to a statutory requirement for patentability.

Claim 1 claims an image processor, claim 8 claims a print system, claim 15 claims a method of image processing and claim 16 claims a computer-executable program which processes a plurality of different types of input data and outputs the processed data to an image output device. A converter converts all the plurality of different types of input data to output data by processing the input data according to data type. A detector detects a specific pattern in the data after being converted by the first converter. All the data converted by the first converter passes the detector.

Through the structure, method and program of converting all of the plurality of different types of input data and then detecting a specific pattern in all the data converted by the converter, as claimed in claims 1, 8, 15 and 16, the claimed invention provides an image processor which can accurately detect a specific pattern in an image even when various types of input data are processed. The prior art does not show, teach or suggest the invention as claimed in claims 1, 8, 15 and 16.

Claims 1-13, 15 and 16 were rejected under 35 U.S.C. §102(e) as being anticipated by *Kakiuchi et al* (U.S. Patent No. 6,687,017). In addition, claim 14 was rejected under 35 U.S.C. §103 as being unpatentable over *Kakiuchi et al*.

Kakiuchi et al appears to disclose a printer, a computer, and a print system including the printer and the computer which are reliable in preventing false recognition by an image recognition unit for counterfeiting prevention from hindering printing out even of ordinary images. (col. 1, lines 15-19) A construction of a print system according to a first embodiment is shown in FIG. 1. The print system in FIG. 1 includes a computer 901 such as a personal computer with an installed printer driver 101 and application 102, and a printer 902 which contains an image recognition unit 201 recognizing whether input image data is image data as an object of counterfeiting prevention, a printing out device 202 printing out image data, and a controller 203 controlling printing out device 202 according to a recognition result of image recognition unit 201. Printer 902 prints out color images for each page. (col. 9, line 31-41) Controller 203 of printer 902 has a function of operating image recognition unit 201 for counterfeiting prevention for image data D1 applied from computer 901 for printing out. Image recognition unit 201 determines whether image data D1 which is applied from controller 203 and is to be printed out corresponds to an image as an object of counterfeiting prevention such as by a pattern recognition method, when image data D1 is determined to be an image as an object of counterfeiting prevention, generates an output for informing that, and prohibits a normal print out result concerning image data D1 from being obtained from printing out device 202. (col. 9, line 54-65) FIG. 2 is a block diagram showing a construction of image recognition unit 201 in FIG. 1. Image recognition unit 201 in FIG. 2 is

formed of a scale adjusting portion 2011 performing scale adjustment of input image data D1 for normalization, a color conversion and binarization portion 2012 performing color conversion and binarization of the scale-adjusted image data to emphasize a feature amount, a feature amount extraction portion 2013 extracting the feature amount from the color converted and binarized image data, a dictionary 2014 storing in advance various feature amounts unique to images as an object of counterfeiting prevention (images such as bank notes and securities, for example), and a matching portion 2015 collating the feature amount extracted by feature amount extracting portion 2013 with various feature amounts stored in dictionary 2014 to recognize whether the input image data corresponds to an image as an object of counterfeiting prevention and outputting the recognition result. (col. 10, lines 7-24) The types of image data indicated by command C1 are for example in the following (1) to (3). (1) texts of characters formed of fonts (2) drawing commands for straight lines, rectangles, curves, circles, and so on (3) bit map images 1 binary bit map images 2 multi-value (gray) bit map images (a) monochrome gray bit map images (b) color gray bit map images. Among the various image data above, image data formed of command C1 other than command C1 corresponding to a color gray bit map image could not substantially be used to counterfeit bank notes and securities. Therefore, printer driver 101 of computer 901 monitors whether a page when image data D1 is produced includes command C1 indicating a color gray bit map image, when it includes the image, determines that image data D1 can correspond to an image as an object of counterfeiting prevention, and outputs control signal S1 to printer 902 so as to operate image recognition unit 201. When command C1 indicating a color gray bit map image is not included,

however, printer driver 101 determines that image data D1 does not correspond to an image as an object of counterfeiting prevention, and does not output control signal S1 to printer 902 so as not to operate image recognition unit 201. Printer 902 has a function of operating image recognition unit 201 only when control signal S1 is received from computer 901. As described above, when it is recognized that image data D1 corresponds to an image as an object of counterfeiting prevention as a result of operation of image recognition unit 201, image recognition unit 201 outputs output stop signal S2 to controller 203. Thus, controller 203 forces to stop operation of printing out device 202 in response to reception of output stop signal S2, thereby prohibiting printing out of the image as an object of counterfeiting prevention. (col. 10, line 45 through col. 11, line 15) Thereafter, printer driver 101 determines whether the type of the image data indicated by command C1 received from application 102 is the type of image data as an object of counterfeiting prevention (a color gray bit map image in this embodiment) (step 404). When the type of the image data indicated by command C1 received from application 102 is determined to be a color gray bit map image (YES in step 404), control signal S1 is set at an appropriate value and thus image recognition unit 201 of printer 902 attains an operative state. When the type of the image data indicated by command C1 received from application 102 is not determined to be a color gray bit map image (NO in step 404), the process of step 405 is skipped and control signal S1 is not changed. Thus, image recognition unit 201 of printer 902 remains to be stopped. (col. 11, lines 28-42)

Thus, *Kakiuchi et al* merely discloses that only image data, that is determined to be a color gray bit map image, is input to the image recognition unit 201 (i.e., only gray bit map image data is converted by color conversion and binary portion 2012 of

image recognition unit 201). Thus nothing in *Kakiuchi et al* shows, teaches or suggests converting all of the plurality of different types of input data as claimed in claims 1, 8, 15 and 16. Rather, *Kakiuchi et al* only discloses that the conversion in unit 2012 of image recognition unit is for color gray bit map imagery.

Since nothing in *Kakiuchi et al* shows, teaches or suggests converting all the plurality of different types of input data to output data as claimed in claims 1, 8, 15 and 16, applicants respectfully request the Examiner withdraws the rejection to claims 1, 8, 15 and 16 under 35 U.S.C. §102(e).

Claims 2-7 and 9-14 depend from claims 1 and 8 and recite additional features. Applicants respectfully submit that claims 2-7 and 9-13 would not have been anticipated by *Kakiuchi et al* and that claim 14 would not have been obvious within the meaning of 35 U.S.C. §103 over *Kakiuchi et al* at least for the reasons as set forth above. Therefore, applicants respectfully request the Examiner withdraws the rejection to claims 2-7 and 9-13 under 35 U.S.C. §102(e) and withdraws the rejection to claim 14 under 35 U.S.C. §103.

Claims 17 and 19 were rejected under 35 U.S.C. §103 as being unpatentable over *Kakiuchi et al* and further in view of *Lapstun et al* (U.S. Patent No. 6,912,067). In addition, claims 18 and 19 were rejected under 35 U.S.C. §103 as being unpatentable over *Kakiuchi et al* and further in view of *Owada et al* (U.S. Patent No. 6,108,098).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Kakiuchi et al* shows, teaches or suggests the primary features as claimed in claims 1, 8, 15 and 16, applicants respectfully submit that the combination of the primary reference with the secondary references to *Lapstun et al* or *Owada et al* would not overcome the deficiencies of the primary reference. Therefore, applicants respectfully request the Examiner withdraws the rejection to claims 17-20 under 35 U.S.C. §103.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge
our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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